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Impressive left ventricular pseudoaneurysm mimicking a pericardial tamponade 5 years after mitral valve replacement for endocarditis

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A 66-year-old female patient with a history of mechanical mitral valve replacement (MVR) due to endocarditis 5 years ago was referred with shortness of breath, tachycardia, and beginning hypotension. In addition, the patient appeared to have prominent jugular veins suggesting a pericardial tamponade. Transthoracic echocardiography (TTE) displayed a partly calcified pericardial effusion (13 × 8 cm) compressing the right ventricle (RV) and the right atrium (RA) (*Panel A*), and computed tomography revealed a giant left ventricular pseudoaneurysm (LVPA) (10 × 10 cm) originating from the posterior mitral valve annulus (*Panel B*, white arrow). The impressive LVPA compressing the RV, the RA, and the inferior vena cava (*Panels C and D*; see Supplementary Video 1) was perfused through a tunnel-like structure (*Panel E*, black arrow; see Supplementary Video 2) that communicated with the left ventricular posterolateral wall below the prosthetic mitral valve. The LVPA was partially resected and a 4 × 4 cm atrioventricular dehiscence became

apparent (*Panel F*, black arrow) which was repaired from the inside of the left atrium using a 4 × 4 cm patch, before re-replacement of the mechanical valve (MVR) was performed. The procedure was uneventful and the patient made a swift recovery. Here, we present a very impressive image and motion series of a giant LVPA originating from below the mitral annulus 5 years after mechanical MVR. Left ventricular pseudoaneurysm is a rare condition that is difficult to diagnose (Miura *et al.*, *Ann Thorac Surg* 2008;**85**:643–645). Although myocardial infarction is the most common reason for LVPA (Amasyali *et al.*, *Int J Cardiol* 2007;**119**:e51–e5), one-third result from surgical procedures, most often after MVR (Frances *et al.*, *J Am Coll Cardiol* 1998;**32**:557–561). Therefore, regular follow-up including TTE is mandatory after MVR.

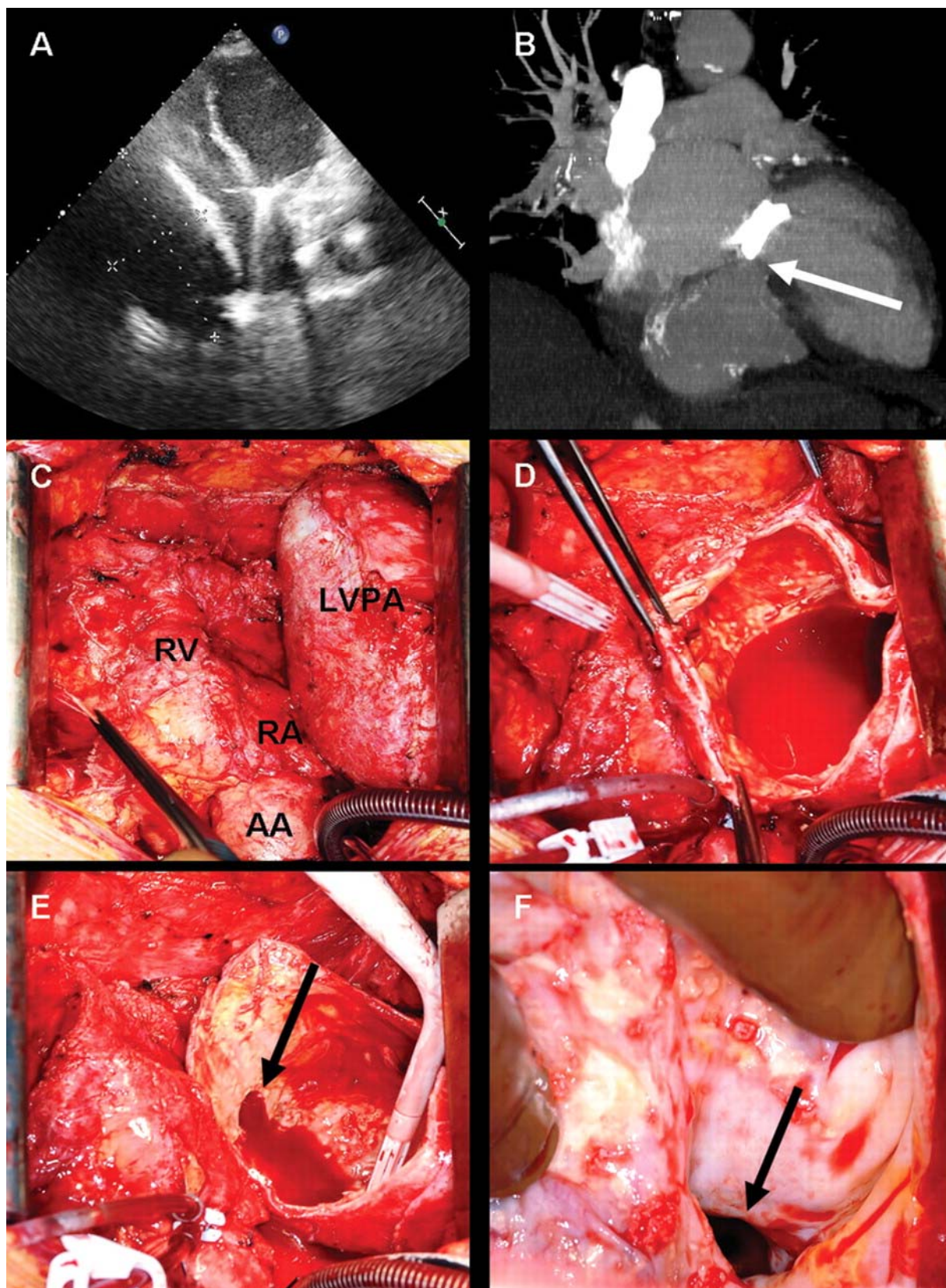


Figure. RV, right ventricle; RA, right atrium; AA, ascending aorta; LVPA, left ventricular pseudoaneurysm.